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Indian Standard

CODE OF PRACTICE FOR
STORAGE AND HANDLING OF THERMAL
INSULATION MATERIALS

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Indian Standard

CODE OF PRACTICE FOR STORAGE AND HANDLING OF THERMAL INSULATION MATERIALS

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Indian Standard

CODE OF PRACTICE FOR STORAGE AND HANDLING OF THERMAL INSULATION MATERIALS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 8 June 1983, after the draft finalized by the Thermal Insulation Materials Sectional Committee had been approved by the Chemical Division Council.

0.2 Proper storage and handling of thermal insulation materials is essential because their insulating properties could be adversely affected by improper storage and handling. This standard has been prepared to help minimize deterioration of thermal insulation materials during storage and handling.

0.3 This standard does not seek to provide information on safety aspects of handling thermal insulation materials, such as safety of workers and work space environment, the regulations for which are being formulated by the Ministry of Labour. Where such safety regulations have been specified, it should be ensured that safety standards issued by the regulatory agency are adhered to.

1. SCOPE

1.1 This standard lays down the recommended practices to be followed for storage and handling of thermal insulation materials before application.

1.2 The materials covered in this standard are as follows:

- a) Rigid materials, such as insulating bricks, preformed calcium silicate blocks, rigid polyurethane foam and expanded polystyrene;
- b) Semi-rigid materials, such as mineral and glass wool (loose and mats), asbestos and asbestos base boards; and
- c) Materials in powder form, such as castables and pouring materials; exfoliated vermiculite, mica and perlite.

2. STORAGE

2.1 Before storage, the material shall be either in original packages or re-packed properly.

2.2 The recommended maximum stacking height and mode of stacking during storage of insulation materials are given in Table 1. These are given keeping in view the compressibility, physical properties, effect of moisture, handleability and fragile nature of materials. In case the material is stored on racks or in boxes where the upper layers do not have any effect on the material on the lower layers, the limitations given shall not apply.

TABLE 1 STORAGE OF THERMAL INSULATION MATERIALS

TYPE OF MATERIAL	STACKING HEIGHT	MODE OF STACKING
(2)	(3)	(4)
	m.	
i). Rigid:		
a) Insulating brick	3	tacked under covered shed one above the other on ground. The space should be free from dampness, fumes and oil. For expanded polystyrene and rigid polyurethane foam there should be minimum 0.5 m clear distance from electric lamps and fittings and a 'No Smoking' sign should be displayed near the storage space
b) Rigid polyurethane foam	No limit	
c) Preformed calcium silicate block	2	
d) Expanded polystyrene	No limit	
ii) Semi-Rigid:		
a) Mineral wool (loose)	3	Stacked under covered shed in individual packages. The space should be free from damp, oil, fume and sulphur bearing gases. The bags should be supported on wooden platform (for loose wool)
b) Glass wool (loose)	3	
c) Asbestos boards	2	
d) Mineral wool mat (bonded)	3	
e) Glass wool (bonded)	3	
iii) Loose Powder:		
a) Castable	2	Stacked under covered shed in individual packages. The ground should be free from damp. Wooden planks of suitable thickness shall always be provided over the floor before stacking the bags
b) Pouring material, mica, perlite, etc	2	
c) Exfoliated vermiculite	1.5	

3. HANDLING

3.1 Care should be taken to ensure that in all cases where weatherproof packing is given, the packing remains intact after handling. In the case of formed bricks and calcium silicate blocks, rough handling might result in scratches and breakage that may render the use of such blocks difficult and may further reduce insulating properties of the finished insulation incorporating such blocks. Careful handling is required to avoid breakage and distortion or tearing off of the bags or cover. Slings and ropes should not be used without adequate packing to prevent damage to insulating materials.

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